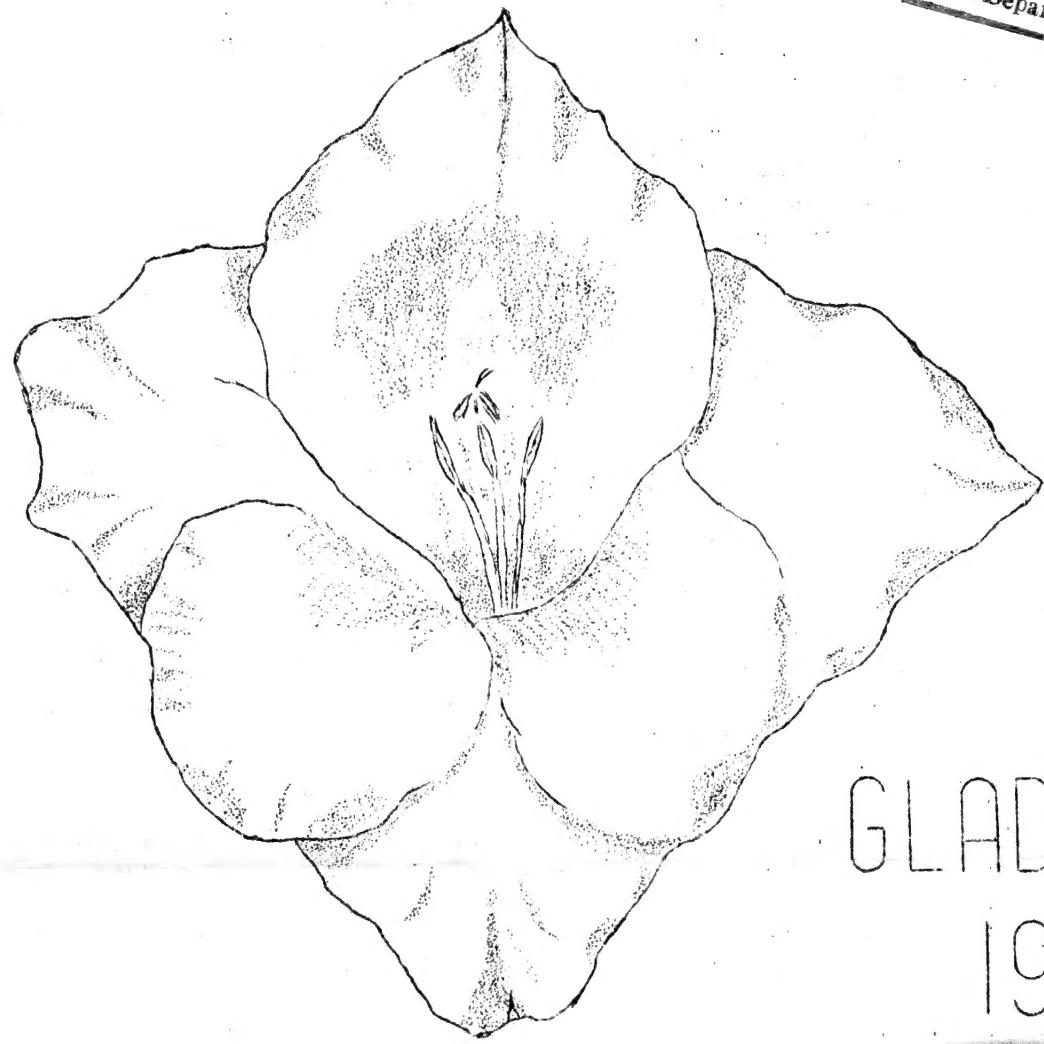
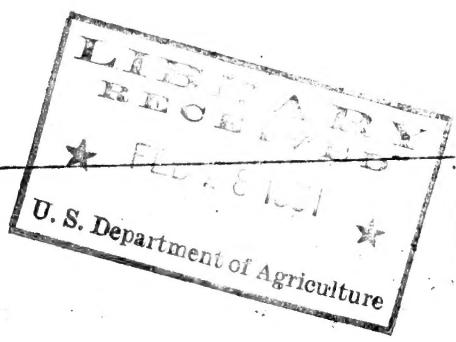


## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.



62.91



GLADIOLUS  
1951

RALPH J. POMMERT & SON  
PACIFIC, WASHINGTON

PLEASE READ THIS BEFORE MAKING OUT YOUR ORDER

Washington customers must include 3% Sales Tax on all orders, unless bulbs are purchased for resale or for commercial cutflowers.

TERMS - Please do not send us orders under \$3.00, as smaller orders can be handled only at a loss. All orders under \$5.00 are cash with order. On orders over \$5.00, you may if you desire, send 25% with order and the balance before shipment, or shipment can be made COD for the balance.

TRANSPORTATION COSTS - All bulbs from the Retail List,- but not from the 100-Rate List,- will be shipped prepaid anywhere in the U.S. Small orders will be shipped by parcel-post as soon as danger of freezing in the mail is past. Pacific coast or Texas orders can be sent at any time,- as a rule. Larger orders can be sent at any time by express.

All bulbs priced by the 100 or 1,000 are shipped f.o.b. here,- customer pays the transportation charges upon delivery.

If your order is taken from both the Retail and Quantity lists, we will ship collect for transportation, and add enough bulbs to pay for the charges on the bulbs from the Retail list.

(\*) In the descriptive list you will note this mark \* following many of the varieties. This means "Refer to Quantity List (100 rate list) for prices." In other words, we do not sell less than 20 bulbs of the cheaper varieties. Also, please note that the minimum item sold from the 100-rate list is 50¢.

In the Retail List you may order 5 bulbs at the 10 rate, except that we sell no item from the Retail List for less than 20¢. Increased labor costs make this minimum necessary.

OUR GUARANTEE ! If, for any reason, any bulbs purchased from us are unsatisfactory upon arrival, just return them promptly for a full refund, including transportation charges. Or, if at blooming time, you feel that your order was not properly filled, just let us know what is wrong and we will try to adjust any error to your satisfaction. Of course, we cannot guarantee that every bulb we sell will make a good spike, as your growing conditions are beyond our control. Nor can we guarantee germination of bulblets.

Large bulbs (L) are size No. 1 and 2. These sizes are best for growing exhibition spikes. Medium bulbs (M) are sizes No. 3 and 4. These sizes are commonly used for out-door cutflower growing. Most varieties will make almost as good spikes from this size as they do from larger bulbs. Small sizes (S) are No. 5 and 6, are used mainly for increase and for growing large bulbs for the following season. However, many bulbs of this size, if given good care, will make small spikes the first season.

NEW VARIETIES - This season we have added a few new varieties to our list, but we have dropped 34 that appeared in our 1950 list. In some cases these discontinued varieties have been replaced with newer varieties that are better. In other cases they have been dropped merely because we must keep our list down to a certain size,- and we anted to add a few new ones. Just because a variety is new or high-priced it is not necessarily the best in it's color-class. Greta Garbo, Pfitzer's Masterpiece, Snow Princess, Burma, Marguerite, and many other not-so-new varieties, can still win the blue ribbons in stiff competition.

Each year we try out many new varieties, and also act as a judge of new seedlings in two national trial gardens. We cant try them all, of course,- no one has that kind of money. But just as soon as we find new ones that are really worth-while, we will add them to our list. There are some varieties that do well here, that do not do well in the midwest,- and vice versa.

## RETAIL PRICE-LIST

1951

ABIGAIL (Myers 44) 466 An early lavender that grows well. Similar in color to Minuet. Opens about 8. Good propagator. (L 25¢; M 2/30¢; S 3/30¢)

ABU HASSAN (K&M 47) 378 Dark violet-blue, with almost black buds. Early mid-season. One of the best in this color. \*

ADMIRAL DE RUYTER (K&M 48) 532 Medium salmon-pink, creamy throat. Will open about 6 florets on a good, strong spike. (L 50¢; M 30¢; S 20¢)

ANKARA (Salman 47) 570 Deep wine-red, with white line on lip. Late mid-season. Has a brown cast in the red. (L 35¢; M 20¢; S 3/25¢)

ANNAMAE (Pommert 40) 400 One of the best early snow-white glads. Very dependable and widely grown cutflower. (None for sale this season.)

ARANJUEZ (K&M 48) 522 Fine clear orange, with cream throat. Nice spike and placement. Should be 422? Late mid-season. (L 2/25¢; M 4/25¢; S 6/25¢)

ATLAS (Pfitzer 39) 378 Early, medium violet-blue, somewhat lighter in the throat, with darker center. Nice cutflower. (L 10/80¢; M 10/50¢; S 10/25¢)

AUREOLE (Pruitt 48) 410 Richly ruffled medium yellow of distinction. Mid-season. (L 2/25¢; 10/\$1.00; M 4/25¢, 10/50¢; S 10/35¢)

BELLE JAUNE (K&M 48) 312 Deep yellow without markings. One of the best in this class. (L 50¢; M 25¢; S 2/25¢)

BENJAMIN BRITTON (K&M 49) 366 Deep magenta, approaching light purple. Very popular, but lacks purity of color. (L 40¢; M 25¢; S 2/30¢)

BENISON (Palmer 43) 400 White, tinted lavender. Midseason. Opens a lot of florets, and a popular cutflower here. (L 10/80¢; M 10/50¢; S 10/25¢)

BERNARD SHAW (K&M 47) 440 Clear light pink with carmine feathering. Opens about 6 on a good spike. (L 40¢; M 25¢; S 2/30¢)

BETTER TIMES (K&M 46) 376 Fresh, light violet-blue, with deeper throat tipped with white. Good. (L 10-\$1.00; M 10-60¢)

BETTY DUNCAN (Benedict 49) 422 Good salmon-orange, blending to a yellow throat. (L 50¢)

BIG TOP (Rich 42) 541 Immense light salmon-pink, with small carmine feather in throat. Mid-season. A giant. \*

BLACK OPAL (Errey 36) 354 Rich black-red, with nice spike and placement. Still one of the best. (M 10/40¢; S 10/25¢)

BLOEMFONTEIN (K&M 48) 430 Nice buff-salmon with soft yellow throat. Tall and a good cut-flower. (L 10-80¢; M 10-50¢)

BOLDFACE (Evans 47) 533 Deep salmon with deep red throat on white. Has nice growing habits. (L 50¢; M 40¢; S 30¢)

BOLERO (Leffingwell 41) 582 Smoky orange with brown throat. Heavily ruffled and needle-pointed. A striking novelty. \*

BOULOGNE (Salman 47) 562 A strong wine-red. Opens 6-8 florets of good substance. Good cut-flower. \*

BOUTON D'OR (De Bruyn 50) 412 Canary yellow. Wide-open, ruffled florets nicely attached to wiry spike. (L \$1.00; S 50¢)

BURMA (Palmer 43) 562 Heavily ruffled deep rose-red. Florets are large and of heavy texture. A great favorite. \*

CARRARA (Beerman 45) 500 A good, husky white. A very good cutflower in this area, - the florists like it. \*

CIRCE (K&M 49) 523 Soft scarlet-orange with deeper throat and creamy yellow band. Midseason. (L \$2.00; S \$1.00)

CORAL GLOW (Ellis 37) 424 Glowing orange-red. Nice spike, but florets will sun-fade in hot climates. \*

CORONA (Palmer 40) 560 Creamy white with pink edge on all petals. If you have had "poor luck" with this, try our fusarium-free stock. \*

DAISY MAE (Lins 45) 521 Orange-pink with cherry throat mark. A very, strong husky grower. Late. \*

DEBORAH SAMPSON (Scheer 47) 440 Delicate pink, blending to a creamy buff. Opens 6-8 on a nice spike. (L 25¢; M 2/25¢; S 4/25¢)

DESTINY (Butt 43) 536 Tall spikes of flaming scarlet, with throat petals marked with white lines. (L 10/80¢; M 10/50¢; S 10/30¢)

DOROTHY ARMSTRONG (Beard 48) 470 A very nice purple on a good spike. Does best from medium sized bulbs. (M 20¢; S 2/25¢)

ELIZABETH THE QUEEN (White 41) 566 Ruffled lavender, darker throat lines. One of the best, altho spikes usually only of medium height. \*

EUREKA (Fairweather 48) 500 White sport of Picardy. This looks like one of the best of the Picardy sports. (L 25¢; M 2/25¢)

EVANGELINE (Palmer 48) 560 Light pink with rose cast, blending into rich creamy throat. Late. (L 75¢; M 50¢; S 35¢; Blts 10/50¢)

FLORENCE NIGHTINGALE (Harris 47) 400 Said by most authorities to be the best all-round white glad. Should be 500. (L 25¢; M 20¢; S 2/30¢)

FLYING FORTRESS (Wilson 43) 568 Large smoky gray, with 10-12 open florets. In great demand, altho given to poor placement. (L 2/30¢; M 2/20¢; S 3/25¢)

FRIENDSHIP (Fischer 49) 442 Soft pure pink shading to cream, with large white throat. Very early and very good. (L 50¢; M 35¢; S 25¢; Blts 10/25¢)

GENERAL EISENHOWER (Salman 48) 542 Deep begonia pink. Huge spikes with 6-8 open florets. (L 10/\$1.00; M 10/50¢; S 10/25¢)

GOLDEN STATE (Wheeler 42) 512 Good exhibition yellow that is quite popular on the Pacific coast. (M 2/25¢; S 4/25¢)

GOLDEN FAVORITE (Salman 48) 512 Blooms about 20 days earlier than Golden State. Try them both. (M 2/25¢; S 4/25¢)

GREEN LIGHT (Pfitzer 40) 306 Pale greenish-yellow or chartreuse. Beautiful spike when well grown. Stock very limited. (L 10/\$1.00; M 10/60¢)

GRETA GARBO (Pfitzer 37) 440 Very pale light rose, with creamy throat. One of the most beautiful glads. Not new, but you will love it. \*

HARRY HOPKINS (Salman 47) 554 Unusual shade of purplish rose-red. Strong and healthy grower. (L 20¢; M 2/20¢; S 5/20¢)

HARVEST MOON (Jack 38) 411 Good medium yellow. Placement variable. An old variety, but still a popular cutflower. Late mid-season. \*

HIGH FINANCE (Wilson 40) 582 Smoky light orange-gray, with creamy throat. Very popular cutflower in this area. Should be 482. \*

HIGH LIFE (K&M 46) 376 A very nice early light "blue", with an inconspicuous throat mark. Becoming popular. (L 10/\$1.00; M 10/50¢)

HINDENBURG'S MEMORY (Pfitzer 39) 552 Deep blood-red. An older variety, but it can still win the blue ribbons. \*

HOCUS POCUS (K&M 49) 213 Golden yellow with large mahogany-red throat. Very early. Startling color combination. Makes unusual arrangements. \*

HOLLAND'S GLORY (K&M 46) 420 Dark salmon-pink with cream throat. Makes nice straight spikes, with 7-8 well-placed florets open. \*

HUNTRESS (Jack 45) 466 Very good pinkish-lavender, with up to 8 open. Early mid-season. Rap'd propagator and makes large bulbs from bulblets. \*

ILE DE FRANCE (Blom 46) 431 Salmon pink with red markings on a yellow throat. Makes a tall and fairly slender spike, - the florists like it. \*

JE MAINTIENDRAI (K&M 46) 436 Velvety scarlet on strong stems. Opens 6-7 nice florets. Won the blue at Yakima in both 1949 and 1950. \*

JOH. v KONYNENBURG (K&M 47) 436 An orange shade of garnet-red. Opens up to 10 well-placed florets. Rapid propagator. \*

JOHANN STRAUS (Salman 48) 450 Light red. Opens 6-8 on a good spike, with many other buds showing color. Mid-season. (L 2/25¢; M 4/25¢; S 6/25¢)

JOHANN S. BACH (Pfitzer 34) 536 Salmon-scarlet with lighter throat. Will open 12 well-placed florets. Not recommended for hot climates. \*

JUNE BELLS (Juniklokken) (Goede 48) 400 Early white, with faint lavender line in throat. Healthy grower and the florists like it. \*

KING CLICK (Wilson 41) 552 Bright red, opening up to 9 florets on a long flowerhead. Our florists like this. Should be 452. \*

LADY JANE (Lake 41) 406 Clear cream with yellow lip petals. Opens 8-10 on a nice spike. One of the best for either exhibition or cutflowers. \*

LAKE PLACID (Wilson 45) 406 Ruffled light cream with yellow throat. Late. Very popular for a late cutflower. (L 2/25¢; M 4/25¢; S 10/50¢)

LANCASTER (Palmer 44) 470 Pansy-purple. Late mid-season. This is rightly one of the most popular purple glads. ( L 2/30¢; M 3/25¢; S 5/25¢)

LAVENDER AND GOLD (Baerman 43) 366 A fresh, clean light lavender, touched with a cream-gold throat. Early. (L 10/80¢; M 10/40¢; S 10/25¢)

LEEUWENHORST (Salman 48) 460 Tall, light lavender-pink, with purple feather in the throat. Should be 560. \*

MANSOER (Salman 47) 454 Dark brown-red. Both placement and growth is very good. Always sold out early. (M 5/25¢; S 8/25¢)

MARGUERITE (Pommert 39) 533 Giant watermelon-pink with cream throat. Long flowerhead but sometimes a short stem. Beautiful color. (L 10/80¢)

MARIE ANTOINETTE (K&M 48) 531 Medium salmon-red, with deep violet-red throat. Fine cutflower. Prolific. Should be 431. (L 10/80¢; M 10/50¢)

MID-AMERICA (Knierim 47) 550 Giant light red. Florets 7 to 8 inches across. A great show glad, but not a commercial. (L 25¢; M 20¢; S 2/20¢)

MISS WISCONSIN (Krueger 43) 460 Medium rose-pink, with up to 8 open. An excellent cut flower, but variable in height. Late midseason. \*

MODERN TIMES (Salman 48) 560 Light wine-red, with narrow white line on lip, We like the color of this one. Should be 460. (L 2/25¢; 4/25¢; S 10/25¢)

MYRNA FAY (Lines 46) 466 Medium shade of lavender, often flecking deeper. Very prolific variety. (L 2/30¢; M 3/25¢)

MRS MARK'S MEMORY (K&M 41) 570 Reddish-purple with darker lip. Altho an old variety, it can still take the blue ribbons. \*

NEW ERA (Ellis 35) 440 Beautifully ruffled peach-blossom pink, with creamy throat. Straight. An older variety, but still one of the prettiest. \*

NEW AMSTERDAM (K&M 49) 452 Very nice wine-red, with deeper lip. We like Modern Times better, altho it is different. (L \$1.00; S 20¢)

NOVA ZEMBLA (K&M 48) 500 Pure white. Opens about 8 wide-open florets on a good spike. Stock limited. (L \$2.00; M \$1.00; S 50¢; Blts 2/25¢)

OBERBAYERN (Pfitzer 42) 379 Dark violet-blue with conspicuous cream-white throat. Very striking and popular. (Stock with-held for propagation.)

OCTOBER SUNSHINE (Quackenbush 47) 420 Light orange-buff, shading to a light yellow throat. Well named. (M 25¢; S 2/25¢; Blts 10/25¢)

OKLAHOMA (Wilson 45) 386 Smoky lilac, with rose feather over yellow throat. One of the best smokies in the 86 class. (M 4/25¢; S 10/25¢)

PACTOLUS (K&M 47) 417 Apricot-cream with orange-red throat. Will open 8 on a nice spike. Very good. (M 2/25¢; S 4/25¢)

PATRICIAN (Scheer 47) 566 Clear lavender of rather dark shade. Our stock of this seems to be free of "white-break." (L 50¢; M 35¢; S 25¢)

PAUL RUBENS (Salman 47) 470 Dark reddish-violet or magenta-purple. Nice grower and good cutflower. (L 2/25¢; M 4/25¢; S 8/25¢)

PFITZER'S CENTURY (Pfitzer 47) 436 Large heavily textured light scarlet. Late. Nice color. (L 25¢; M 2/25¢; S 4/25¢)

PFITZER'S MASTERPIECE (Pfitzer 38) 330 Light salmon-pink with effective cream throat. Many open. Recommended for Pacific Coast only. \*

PICARDY (Palmer 31) 530 The most widely grown of all glads. An old variety, but still one of the most popular light salmon. \*

POUSSIN (Salman 47) 485 Morocco-red, red throat with yellow line. Opens about 6 leather-like florets on a good spike. ( M 3/25¢; S 4/25¢)

PRESIDENT TRUMAN (Salman 48) 540 Pale pink with creamy white throat. Fine, erect spikes. Late mid-season. Long flowerheads. Good. \*

PURPLE SUPREME (Wilson 42) 470 Very tall purple with nice flowerhead. A dry weather glad, will peel in humid weather. \*

QUEEN CHARLOTTE (Dowling 46) 310 Light yellow. This glad will open more florets at once than any other glad we grow. (L 50¢; M 25¢)

RADIANCE (Butt 42) 350 There are larger and better reds for exhibition, but this glad has been a money-maker for cutflower growers in this area. \*

RAVEL (K&M 47) 477 Violet-blue with reddish-brown throat markings. One of the best of the medium blues. (L 2/25¢; M 4/25¢; S 8/25¢)

RED CHARM (Butt 39) 452 One of the best of the medium-dark red varieties in the lower price class. Opens 8-9 well-placed florets. \*

RED WING (Wright 48) 436 Scarlet-red slightly deeper in the throat. Slightly ruffled. Healthy grower. ( L \$1.50; M \$1.00; S 50¢; Blts 2/25¢)

RITA MAE (Pommert 47) 450 Medium-light red. Attachment poor for commercial, but a fine exhibition in this area. (L 2/25¢; M 4/25¢; S 8/25¢)

ROSY LIGHT (Jack 46) 460 Popular light rose. Taller, but not as early as older Early Rose. (L 2/25¢; M 4/25¢; S 8/25¢)

SALMAN'S GLORY (Salman 47) 507 Light cream with red markings on light yellow throat. Nice large florets on a tall spike. Nice cut-flower. \*

SHERWOOD (Pruitt 48) A dandy purple in a deep, rich shade. Wide open ruffled florets. Good. (L 50¢; M 35¢; S 25¢; Blts 8/25¢)

SILVER GULL (K&M 48) 476 Silver blue-gray with cream throat. A glad that is different. Stock very limited. (L 25¢; M 2/25¢)

SILVER WINGS (Ritsema 44) 500 White with a touch of cream in the throat. A sport of Picardy. Good cut-flower. (L 2/25¢; M 4/25¢)

SKYMASTER (Salmon 49) 541 Peach-blossom pink with slight red throat lines. A blue-ribbon winner in this area. (L 25¢; M 20¢; S 2/25¢)

SNOW PRINCESS (Pfitzer 39) 400 This white is too well-known to require description. The standard for commercial whites. \*

SPARKS (Glass 47) 507 Large light yellow, with radiating scarlet lines from throat. Nice exhibition. (L 20¢; M 2/25¢; S 4/25¢)

SPIC AND SPAN (Carlson 46) 432 Ruffled deep pink, opening about 10 on a 20-22 bud spike. Very good. (L 20¢; M 2/25¢; S 4/25¢)

SPITFIRE (Evans 43) 432 Clear rosy-toned salmon, white throat marked with several small cherry lines. Strong plant. (L 25¢; M 2/25¢; S 3/25¢)

SPOTLIGHT (Palmer 44) 413 Nice clear yellow with red throat. Midseason. Blooms well from small bulbs. Good commercial. \*

SUNSPOT (Roberts 45) 417 Light apricot-buff with a rose spot in throat. A great ribbon-winner. (L 25¢; M 2/30¢; S 2/20¢)

SURFSIDE (Winsor 37) 400 Very nicely ruffled milk-white, with faint lavender pencil in throat. Our best late cutflower white. \*

SWEET SEVENTEEN (Blom 47) 460 Soft peach-rose with greenish yellow sheen in throat. Graceful and wiry, but placement is usually poor. \*

TAKINA (Burns 33) 570 Rosy-purple,- some call it cerise. Old, as glads go, but still popular for both exhibition and cutflowers. \*

TIVOLI (K&M 47) 461 Soft clear rose, lighter in throat. Will open 8-10 on a fine spike. One of the best. (L 2/25¢; M 4/25¢; S \* ) \*

TOPFLITE (LaSalle 46) 460 Soft shade of rose. Rather slow propagator. Midseason. (L 75¢; M 50¢; S 25¢; Blts 10/50¢)

UHU (K&M 46) 482 Smoky-brown on orange-salmon ground, with cream throat. One of our best smokies. (Stock withheld for propagation.)

VINCENT VAN GOGH (vWav 48) 432 Nice scarlet-salmon. Early midseason. Opens about 8.. Looks like a good commercial. \*

VOODOO (Kadel 44) 486 Ruffled smoky with stippling of bronze and plum. If you like odd ones, this is it. (L 25¢; M 2/25¢; S 3/25¢)

WEDGEWOOD (Fischer 47) 366 Beautifully ruffled lavender with cream throat. You will love this for arrangements. (L 25¢; M 20¢; S 2/25¢)

WORLD BEATER (Pfitzer 49) 411 Medium light-yellow with rather conspicuous red throat. Not always well-placed. (L 30¢; M 20¢)

WHITE CHRISTMAS (Fischer 48) 500 Pure white shading to cream throat. A beautiful glad, nicely ruffled. (L 25¢; M 2/25¢; S 3/25¢)

YELLOW HERALD (Pfitzer 47) 411 Tall amber-yellow with slight carmine markings in throat. Early cutflower. Heavy propagator. \*

## POMMERT'S PUGET SOUND GLADIOLUS

RALPH J. POMMERT &amp; SON

Pacific, Washington

## PRICE-LIST WINTER AND SPRING 1951

You may order 20 or more bulbs at the 100 rate, except that no item from the 100-rate list for less than 50¢. One pint of bubbles at 1/2 the quart price. Prices in this 100-rate list are f.o.b. Pacific or Auburn, Wash., - customer pays the parcelpost or express charges on delivery. Our minimum order is \$3.00

Per 100	Size	No. 1 1½" up	No. 2 1½-1¾	No. 3 1¾-1	No. 4 1-3/4	No. 5 3/4-1½	No. 6 1-3/8	No. 7 3/8-1	Bblts Quart
ABU HASSAN .....	\$ .	\$4.00	\$3.20	\$ .	\$ .	\$ .	\$ .	\$ .	\$ .
ARANJUEZ .....	.	3.20	2.60	.	1.80	1.20	.90	3.50	
AUREOLE .....	.	.	4.00	3.00	2.00	1.60	.	5.00	
BIG TOP .....	.	.	.	2.00	1.50	1.00	.80	3.00	
BLOEMFONTEIN .....	4.00	3.40	2.80	.	.	.	.	3.50	
BOLERO .....	.	.	3.40	.	1.60	1.25	1.00	3.00	
BOULOGNE .....	4.50	.	2.50	2.00	1.50	1.25	1.00	3.00	
BURMA .....	3.80	3.00	2.40	1.80	1.20	.90	.	3.00	
CARRARA .....	4.50	3.50	2.50	2.00	1.50	1.25	1.00	3.00	
CORONA .....	.	4.00	3.00	.	.	.	.	3.00	
DAISY MAE .....	.	3.40	2.60	2.00	1.60	1.00	.80	3.50	
ELIZABETH THE QUEEN ..	3.50	2.80	2.20	1.80	1.20	1.00	.80	3.00	
FLYING FORTRESS .....	.	.	4.40	3.60	3.00	2.50	1.60	18.00	
GENERAL EISENHOWER ..	6.00	5.00	4.00	3.00	2.00	1.50	1.00	4.00	
GRETA GARBO .....	4.00	3.50	2.60	2.00	1.50	1.25	1.00	3.00	
HARRY HOPKINS .....	.	.	.	6.00	4.00	3.00	2.00	12.00	
HIGH FINANCE .....	.	.	.	.	1.50	1.20	.80	3.00	
HINDENBURG'S MEMORY ..	.	.	.	.	1.50	1.25	1.00	4.00	
HOCUS POCUS .....	4.00	3.50	2.50	2.00	1.50	1.25	1.00	3.00	
HUNTRESS .....	4.40	3.80	3.00	2.40	1.40	1.00	.80	4.00	
ILE DE FRANCE .....	4.00	3.50	2.60	2.00	1.50	1.25	1.00	3.00	
JE MAINTIENDRAI .....	5.50	4.60	4.00	3.00	2.00	1.50	1.00	4.00	
JOH. V. KONYNENBURG ..	3.60	3.00	2.20	.	1.40	1.00	.	2.50	
JOHANN STRAUS .....	4.80	.	.	2.50	2.00	1.50	1.25	3.50	
JOHANN S. BACH .....	4.00	3.40	2.60	.	.	.	.	3.00	
JUNE BELLS .....	3.60	3.00	2.20	1.80	1.40	1.00	.80	2.50	
KING CLICK .....	4.00	3.50	2.50	2.00	1.50	1.25	1.00	3.00	
LADY JANE .....	3.40	.	.	1.80	1.40	1.00	.80	2.50	
LAKE PLACID .....	5.80	.	4.00	3.00	2.00	1.50	1.20	4.50	
LANCASTER .....	5.00	.	.	.	2.20	1.50	1.00	4.00	
LEEWENHORST .....	.	.	2.50	2.00	1.50	1.25	1.00	3.00	
MANSOER .....	.	.	4.00	3.00	2.00	1.50	1.20	5.00	
MARGUERITE .....	4.00	3.30	2.70	.	.	.	.	3.00	
MISS WISCONSIN .....	.	.	2.80	2.00	1.40	1.00	.80	4.00	
MRS MARK'S MEMORY ..	.	3.30	2.60	.	.	.	.	3.00	
NEW ERA .....	4.00	3.30	2.60	.	1.20	1.00	.80	2.50	
PATRICIAN .....	30.00	26.00	24.00	20.00	14.00	9.00	6.00	40.00	
PAUL RUBENS .....	.	.	.	2.00	1.50	1.25	1.00	3.50	
PFITZER'S CENTURY ..	12.00	10.00	8.00	6.00	5.00	4.00	2.00	12.00	
PFITZER'S MASTERPIECE	3.40	2.80	2.20	1.70	1.40	1.00	.80	2.50	

	Per 100	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	Blts	Qt
PICARDY .....	\$3.50	\$2.80	\$2.20	\$1.70	\$1.40	\$1.20	\$1.00	\$ 2.50		
PRESIDENT TRUMAN ....	.	4.00	3.30	2.60	2.00	1.40	1.00		3.00	
PURPLE SUPREME .....	3.50	2.80	2.20	1.70	1.40	1.20	.80		2.50	
RADIANCE .....	3.50	2.80	2.20	.	.	.	.		2.50	
RED CHARM .....	.	.	2.20	1.60	1.20	1.00	.80		2.50	
RITA MAE .....	5.00	4.00	3.50	3.00	2.50	2.00	.	5.00		
SALMAN'S GLORY .....	4.40	3.80	3.20	2.40	2.00	1.40	1.00	OUT		
SKYMASTER .....	15.00	12.00	10.00	8.00	6.40	5.00	4.00	10.00		
SNOW PRINCESS .....	3.40	2.60	.	1.40	1.20	1.00	.	2.50		
SPIC AND SPAN .....	7.00	5.80	4.70	3.80	3.00	2.40	1.90	22.00		
SPOTLIGHT .....	.	.	2.40	1.60	1.30	1.10	.80	3.00		
SURFSIDE .....	3.60	3.00	2.40	1.60	1.30	1.10	.80	2.50		
SWEET SEVENTEEN .....	4.00	3.40	3.00	.	.	.	.	4.00		
TAKINA .....	.	3.00	2.40	.	.	.	.	3.00		
TIVOLI .....	4.80	4.00	3.20	2.50	2.00	1.40	1.00	6.00		
VINCENT VAN GOGH ....	4.00	3.40	.	1.80	1.40	1.00	.	3.00		
YELLOW HERALD .....	3.60	3.00	2.50	2.00	.	.	.	2.50		

If your order from this 100-rate list amounts to \$20 or more, and consists of 3 or more varieties, you may deduct 5% quantity discount.

Commercial growers, or others purchasing in quantity, are requested to write for our wholesale price-list.

We receive a great many letters from customers who have been delighted with the results they have had from our bulbs. These letters are appreciated, but we do not have space in our limited catalog to reproduce them. But we want you all to know that we enjoy receiving them, and they spur us on to greater efforts to see that we continue to receive your good-will.

We also receive quite a few letters asking for a list of varieties that are the best exhibition glads for Pacific-coast conditions. We can recommend the following as being mighty hard to beat in a show : Spic & Span, Sunspot, Tivoli, Aureole, Florence Nightingale, Aranjuez, General Eisenhower, Burma, Poussin, Belle Jaune, Abu Hassan, Oberbayern and Oklahoma. There are, of course, many others, but you cant "go wrong" on these.

DONT MISS IT ! The 22nd Annual Exhibition of the Washington Gladiolus Society will be held in Auburn, Wash., on August 11 and 12, 1951. This will be held in the beautiful new gymnasium of the Auburn High School, and promises to be the largest and finest gladiolus show ever held in the northwest. There will be classes for novice, amateur, and professional. Everyone is invited to exhibit. If you would like a show schedule and program of events, drop us a postal-card, and we will see that you are mailed a copy as soon as available.

Please use the order-blank enclosed, and keep a copy of your order. And please get your orders in early. We usually start planting here in March. Each year, we have many customers who are disappointed by getting their orders in too late, and many varieties are all sold or planted.

POMMERT GLADIOLUS GARDENS

Ralph J. Pommert & Son

PACIFIC,

WASHINGTON

"Growing glads since 1922"

# Gladiolus Disease Control

New, virulent strains of pathogens have wreaked havoc with the gladiolus industry. The old controls are no longer enough

The control of glad diseases is a several-million dollar problem, and can not be safely ignored. One approach to solving it is presented here by Robert O. Magie, pathologist of gladiolus investigations of the Agricultural Experiment Stations of the University of Florida. It is endorsed by E. H. Price, Jr., manager of the Florida Gladiolus Growers Association.

THE MOST destructive gladiolus disease is caused by a soil-borne fungus, *Fusarium oxysporum f. gladioli* Sny. & Han. The annual loss of flowers and corms due to this disease is over \$3 million, possibly \$5 million. Growers of cutflowers in Florida alone suffered a loss of one and one-half million dollars this past season. Measures that were effective in controlling *Fusarium* rot a few years ago are much less effective in Florida since 1947-48. Average corm losses in the Picardy variety increased from about 12 to 33 per cent between 1946 and 1950. New strains of the *Fusarium* fungus may account for much of this increase.

It is obvious to anyone familiar with the gladiolus industry that the *Fusarium* disease is not adequately controlled by treating the corms with fungicides. Furthermore, it can be stated now that the disease will not be satisfactorily controlled with resistant varieties, as we know them, until species or relatives of gladiolus immune to *Fusarium* are found and this immunity is combined by breeding with the horticultural characteristics of important varieties, such as Picardy. New varieties, as well as old, are succumbing to more virulent strains of the ever-changing fungus. Even Maid of Orleans variety is susceptible to a new *Fusarium* strain isolated from the Spic and Span variety.

## The Missing Link

Fungicidal treatment of corms and disease resistance are, of course, necessary parts of the disease control program, but something more is needed. The missing link is disease-free propagating stocks. Just as the potato industry saved itself years

ago by producing certified planting stock, so must the gladiolus industry now segregate and maintain disease-free propagating stocks. These special stocks, maintained by a few growers, would serve as reservoirs of healthy planting stocks for all bulb growers.

The great need of healthy propagating stocks is highlighted by the Picardy variety. To replace their heavy disease losses in this variety, Florida growers have been buying annually over 25 million corms of Picardy from northern and western bulb growers. In practically every case they got diseased stock; that is, a portion of the corms carried *Fusarium* infection in a dormant state. Because their Picardy stocks are badly depleted and can not be replaced with healthy corms, growers are turning to other varieties. However, Picardy is still the most desirable variety for cutflower shipping. Contrary to what many people think, Picardy is as good a variety as it ever was, except perhaps for unknown or obscure virus infections. The variety has not "run out."

## Temperature Relationship

Picardy corms shipped from northern or western states have an average of about ten per cent of the plants affected with *Fusarium* two months after planting on new land in Florida. Stocks from other countries have not been tested. Treatment of the corms with Lysol or N.I.Ceresan solution before planting only delays the appearance of rotting. These corms appear to be healthy when planted in Florida. They rot because the *Fusarium* infection was carried in the corms in a latent condition in the core region. They are apparently caused by weaker strains of the fungus, and under growing conditions in the Southeast these less virulent strains usually cause rotting.

It may be that *Fusarium* strains differ in temperature requirements. It is believed that latent infections of *Fusarium* explain many cases of poor flower production in certain varieties.

Picardy corms from various parts of the United States were grown on

new land in Florida. In testing numerous lots of Picardy, the writer found only one commercial source of *Fusarium*-free corms. This source is in the region of Pacific and Auburn in western Washington. *Fusarium* infection has disappeared from diseased corm stocks after growing them in that region for two or more years. There are some facts to support the theory that the absence of *Fusarium* disease in fields near Pacific and Auburn is due to the low temperatures that prevail there through the growing season. Dr. C. J. Gould of the Western Washington Experiment Station at Puyallup is interested in the problem and hopes to have more positive information on it. Presumably other regions with growing seasons of closely similar climate would also be suitable for cleaning up *Fusarium*-infested planting stocks.

Some samples of Picardy from small and non-commercial growers also proved to be free of *Fusarium*. These and the thousands of Picardy corms purchased in each of the past three years from western Washington were grown in Florida without *Fusarium* infection as long as they were planted on disease-free land and treated to prevent infections when the corms were cleaned. It was also found that these disease-free corms could be grown on infested land with relatively light losses from disease for the first year or two.

## Cost of Disease-Free Stock

*Fusarium* yellows and corm rot reduce the quality as well as the quantity of flower production. The cost of producing flowers from diseased stocks is high compared to production costs with healthy corms. At \* any reasonable price, disease-free corms of some commercial varieties are not generally available from bulb growers. Florida cutflower growers are being forced to develop and maintain their own planting stocks in order to stay in business, even though most of them prefer to buy their corms. As a matter of fact, flower growers tend to be poor growers of planting stock because their main interest lies in flowers.





The answer to the problem of Fusarium in glads is to grow disease-free planting stocks, as demonstrated so well in the potato industry which had a similar problem 25 years ago. Glad growers have been propagating "table stock" (potatoes fit for eating but no good for planting). They must begin to segregate and build up disease-free propagating stocks. If cormels from disease-free stock can not be obtained, it would be desirable then to grow the variety for a few years in western Washington. As it is now, the best commercial varieties, such as Spic and Span, are being propagated from any and all stocks regardless of disease content. Before it is too late, Fusarium-free stocks of all worthwhile varieties, including new ones as they are released, should be isolated and carefully maintained. This might be done best by growers who specialize in supplying propagating stocks.

#### Virus, Too

Undoubtedly certain areas of the country will be found most suitable for the purpose, because of the greater ease of keeping stocks free of viruses also in those locations.

Viruses and virus-like diseases of glads have been discussed in previous numbers of this publication by Dr. Philip Brierly of the Plant Industry Station, Beltsville, Md. It is sufficient to say here that it would be foolish to set up a program of supplying Fusarium-free corms and not keep the stocks free of virus diseases, too. Although corms can be maintained free of Fusarium in almost any region of the country, the growing of virus-free stock will be definitely limited to areas where isolation from other host plants and/or freedom from insects that transmit the viruses are possible.

#### Production Method

The rapidity with which gladiolus may be propagated makes this program entirely practical. To begin, a large stock of a variety would not be necessary. A few quarts of cormels would be enough in some cases. Once obtained, a Fusarium-free

stock can be maintained in a healthy condition for years by always planting on clean soil, treating with Spergon dust as soon as the corms are broken from the mother corms, and keeping them separate from diseased stocks. Workers or machinery used on diseased stock should not be used on the propagating stocks. It would be best to keep diseased stocks off the farm entirely.

Maximum cormel production may be obtained by planting shallow, irrigating so as to maintain uniform moisture and good aeration of soil, and by spraying to control diseases and insects. Someone who recognizes the symptoms of virus-like diseases and corm rots should rogue the plantings at least three times while in leaf, removing diseased or abnormal plants, corm and all.

If virus infection is found, allow the spikes to open in the field and inspect twice weekly to remove infected plants. Save cormels only from healthy - appearing corms. Corms bearing less than the average number of cormels, those having a dull appearance, and those which do not break from the mother corm cleanly should be discarded along with the cormels because such corms may carry Fusarium. Dust the corms with Spergon or Sperton (wettable) immediately after cleaning off the old corm.

#### Summary of Experience

In summation, it can be said that all commercial varieties are gradually picking up Fusarium infection. The disease can be controlled only by building up disease-free propagating stocks to serve as a reservoir to replace flowering corms as they pick up disease. Experience indicates that in Florida replacement of Picardy would be necessary every four to five years, provided the land is planted to glads no oftener than every third year and if the infections are controlled at cleaning time. It would probably be good economy to replace the stocks as soon as the loss to the disease from a planting reaches 15 to 20 per cent, because, the loss will usually be high enough

the following year to preclude all chance for profit from the crop.

To try to clean up a Fusarium-infested stock on the average farm is an expensive undertaking, and there is grave risk that it will be unsuccessful in the end. Attempts to develop disease-free stocks have failed in most areas because the infection is often latent; because infections spread rapidly when corms are cleaned, or injured in any way; and because roguing of diseased plants in the field must be done frequently and thoroughly.

The fact that a stock of corms appears to be healthy in Michigan, New York, Oregon or elsewhere does not indicate that the corms do not carry the Fusarium fungus. Latent infections are commonly found in corms from these states. Planting corms in the warm soils of Florida tends to activate these infections. An effective program of maintaining disease-free corm stocks would have to recognize this fact. Growers in cooler regions could arrange to have their stocks sampled and tested in warmer soils where Fusarium is very severe. A test farm in the western part of the country, as well as one near the East Coast, could be supported by fees.

The glad industry should be cautioned not to rely on certification (as we know it) to solve the problem of controlling Fusarium. For one thing, inspection can not determine the presence of latent infection. Since most systems of certification offer an incentive and loopholes for circumventing their purposes, it is believed our goal of healthy corms will be attained best by co-operative efforts between the different parts of the industry.

In matters of this nature, the desire of a bulb grower to build and maintain a reputation and the desire of the flower grower to buy healthy corms from a reputable grower are the most effective influences, provided the bulb grower is given the technical help necessary to do a good job.

—Reprinted from SOUTHERN FLORIST AND NURSERYMAN, October 6, 1950 issue

\* Dr Magie later corrected this sentence to read: "At any reasonable price, disease-free stocks are certainly the least expensive for any grower. Because disease-free, corms of some commercial varieties are not generally available from bulb growers."